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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/622,063	07/17/2003	Stephen Francis Rutkowski	126762	2282
41838	7590	02/24/2005	EXAMINER	
GENERAL ELECTRIC COMPANY (PCPI) C/O FLETCHER YODER P. O. BOX 692289 HOUSTON, TX 77269-2289			KOCH, GEORGE R	
			ART UNIT	PAPER NUMBER
			1734	

DATE MAILED: 02/24/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/622,063

Applicant(s)

RUTKOWSKI ET AL.

Examiner

George R. Koch III

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 06 December 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-6,9-12 and 17-23 is/are pending in the application.
- 4a) Of the above claim(s) 9 and 10 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-3 and 11 is/are rejected.
- 7) ☒ Claim(s) 4-6,12 and 17-23 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date 7/17/2003.
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____.

DETAILED ACTION

Election/Restrictions

1. On February 18, 2005, an interview between applicant's attorney, Patrick Yoder, and Patent Examiner George Koch was conducted in order to discuss
2. Restriction to one of the following inventions is required under 35 U.S.C. 121:
 - I. Claims 1-6, 11-12, and 17-23 drawn to a dispensing pen, classified in class 118, subclass 679.
 - II. Claims 9-10, drawn to a method of using a dispensing pen, classified in class 427, subclass 8.

For the record, Claims 7 and 8 are considered to be in the same group as the previously cancelled method claims

The inventions are distinct, each from the other because of the following reasons:

3. Inventions II and I are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case the apparatus can be used in a contact coating process.
4. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

5. Because these inventions are distinct for the reasons given above and the search required for Group I is not required for Group II, restriction for examination purposes as indicated is proper.
6. During a telephone conversation with Patrick Yoder on 2/18/2005 a provisional election was made without traverse to prosecute the invention of group I, claims 1-6, 11-12, and 17-23. Affirmation of this election must be made by applicant in replying to this Office action. Claims 9 and 10 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.
7. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 112

8. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.
9. Claims 3-6 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.
10. In claim 3, line 3, applicant recites the word "thereactross". It appears and has been interpreted that applicant intended "there-across".

Claim Rejections - 35 USC § 103

11. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

12. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

13. Claims 1-3 and 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Ishida (US 5,932,012) in view of either of the identical Chikahisa (US 6,562,406) or Chikahisa (WO99/49987).

Ishida discloses a robotic pen (see Figure 1) comprising a machine including a stage (items 5, 6 and 8) for mounting a workpiece for rotation and orthogonal translation (described in column 5, lines 3-55), and an elevator (items 4a and 10) for translation from said stage; a pen tip (nozzle 1) mounted to said elevator; a dispenser (syringe 2 and nozzle support 12) joined in flow communication with said pen tip for ejecting a stream of material atop said workpiece; and a digital controller (items 14, 16, 17 and 18,

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and see column 6, line 61 to column 7, line 61) configured for coordinating relative movement of said pen tip and said stage, and dispensing of said stream from said pen tip.

Ishida does not disclose that the pen is rotatably mounted to the elevator.

Chikahisa (either US patent or the English translation of WO99/49987) discloses a similar syringe and nozzle applying device wherein a member rotating device (item 230) is used to rotate the nozzles for application. Chikahisa discloses that this rotation enable a shift to a position so as not to come in contact with the wiring (i.e., dispensing) pattern (see column 11, lines 40-45). Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize a rotary mounting in order to achieve better control over nozzle positioning shifts during dispensing.

As to claim 2, Both Ishida and Chikahisa disclose that the dispenser comprises: a syringe (Ishida, item 2 and Chikahisa, item 2153) for storing said material, and joined in flow communication with said pen tip; and means for pumping (Ishida, described in column 5, lines 56-60, and Chikahisa, item 2154) said syringe to dispense material through said pen tip. The applicant's specification does not provide a specific example of a means for pumping other than it needs to be computer controller actuated, which is disclosed in both Ishida and Chikahisa.

As to claim 3, Ishida discloses that the controller includes a predetermined path for the pen tip thereacross (see column 3, lines 18-33) and a three dimensional geometry of the workpiece (i.e., measurement data).

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As to claim 11, Ishida discloses a robotic pen (Figure 1) comprising: a computer numerically controlled machine (items 14, 16, 17 and 18) including a stage (items 5, 6 and 8) for mounting a workpiece for rotation and orthogonal translation (see column 5, for example), and an elevator (items 4a and 10) for translation from said stage; a pen tip (item 1) mounted to said elevator, and a dispenser (syringe 2) joined in flow communication with said pen tip for ejecting a stream of material atop said workpiece.

Ishida does not disclose that the pen is rotatably mounted to the elevator.

Chikahisa discloses a similar syringe and nozzle applying device wherein a member rotating device (item 230) is used to rotate the nozzles for application.

Chikahisa discloses that this rotation enable a shift to a position so as not to come in contact with the wiring (i.e., dispensing) pattern (see column 11, lines 40-45).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of the invention to utilize a rotary mounting in order to achieve better control over nozzle positioning shifts during dispensing.

Allowable Subject Matter

14. Claims 4-6, 12, and 17-23 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

15. The following is a statement of reasons for the indication of allowable subject matter: As to claim 4 and 12, Ishida discloses that the stage includes a first table (item 5) for translation in a first linear axis, a second table (item 6) for translation in a second

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linear axis orthogonal to the first, and theta axis means (item 8) for rotating the the workpiece in a first rotary axis. Both Ishida and Chikahisa disclose that the nozzle (i.e., pen tip) is mounted to a third axis movement device, i.e., an elevator, which moves in a third linear axis orthogonal the first and second linear axes. Furthermore, Chikahisa discloses that the nozzle can move in a rotary axis. Inaba (US 2002/0112821) discloses that rotary nozzles are also known (see the rotation mechanism for rotating the nozzle in claim 1).

Furthermore, there are teaching of moving a nozzle obliquely with respect to the workpiece - for example, as in Rose (US Patent 3,561,398), although the substrate is not moveable in a first and second linear axis and first rotary axis as claimed..

However, there is no disclosure of or suggestion to include the limitation that the nozzle can move in a second axis coordinated with the first rotary axis for orienting the nozzle or pen tip obliquely with the workpiece.

Claims 5-6 depend from claim 4 and are allowable for the same reason.

Claims 17-23 depend from claim 12 and are allowable for the same reason.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to George R. Koch III whose telephone number is (571) 272-1230 (TDD only). If the applicant cannot make a direct TDD-to-TDD call, the applicant can communicate by calling the Federal Relay Service at 1-866-377-8642 and giving the operator the above TDD number. The examiner can normally be reached on M-Th 10-7.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Christopher Fiorilla can be reached on (571) 272-1187. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



George R. Koch III
Patent Examiner
Art Unit 1734

GRK
2/19/2005